



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
CARIBBEAN ENVIRONMENTAL PROTECTION DIVISION
CITY VIEW PLAZA, SUITE 7000
#48 165 RD. KM 1.2
GUAYNABO, PR 00968-8069

JUL 05 2017

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Article Number: 7015 0920 0000 8688 6655

Ms. Irma López
Executive Director
Environmental Compliance, Health, and Occupational Safety
Puerto Rico Aqueduct and Sewer Authority
P.O. Box 7066
San Juan, Puerto Rico 00916-7066

**Re: Compliance Evaluation Inspection
Guanica Wastewater Treatment Plant
NPDES Permit Number PR0020486**

Dear Ms. López:

On June 19, 2017, the United States Environmental Protection Agency (EPA) conducted a Compliance Evaluation Inspection (CEI) at the above referenced Puerto Rico Aqueduct and Sewer Authority's (PRASA) Wastewater Treatment Plant (WWTP) located in Guanica, Puerto Rico. The CEI was conducted pursuant to the authority contained in Section 308 of the Clean Water Act, 33 U.S.C. § 1251 et seq., 40 CFR § 122.41(a)(2), & 1, 2, 3, and in accordance with Agency wide acceptable guidance and procedures. PRASA was represented by Amalio Quiros, Plant Operator; and Ivette Irizarry, Plant Manager.

Enclosed you will find the Inspection Report. The CEI report indicates that certain non-compliance items or deficiencies exist, which should be corrected to ensure compliance with the Clean Water Act and the National Pollutant Discharge Elimination System ("NPDES") Permit. In addition, there are certain areas of concern which are items that could be improved for better operation of the facility. Within forty-five (45) calendar days of receipt of this letter, please respond with the actions that PRASA has taken or will take to address the deficiencies included in the attached Water Compliance Inspection Report.

Should you have any questions feel free to contact Miguel A. Batista, Environmental Engineer, at (787) 977-5823.

Sincerely,



Jaime A. Geliga

Chief

Municipal Water Program Branch

Caribbean Environmental Protection Division

Enclosure

cc. Angel Melendez, EQB
Hector Gierbolini, PRASA

NPDES Inspection Report

COMPLIANCE EVALUATION INSPECTION

Facility Name: Guanica WWTP
NPDES Permit Number: PR0020486
Permit Status: Administrative Extended (12/01/2008 – 11/30/2013)
Renewal Application (05/2013)
Date: June 19, 2017
Time: 8:40 am – 1:10 pm
PRASA Representatives: Amalio Quiros, Plant Operator
Ivette Irizarry, Plant Manager

I. BACKGROUND

A Compliance Evaluation Inspection (CEI) was conducted on June 19, 2017 at the Guanica WWTP. The CEI consisted of an opening interview to discuss the purpose of the inspection and to request information about the facility, a site tour to overview operational and maintenance conditions, a document review to assess records compliance, sampling at the Discharge Point 001 (grab sample taken for a few physical/chemical parameters) to determine permit compliance, and a closing interview to discuss preliminary findings.

II. FACILITY DESCRIPTION AND OPERATOR'S LICENCE STATUS

The Guanica WWTP is a secondary treatment plant. The Guanica WWTP consists of two treatment modules. One module is a 0.5 MGD activated sludge conventional package plant (Old Plant), and the second module is a 1.25 MGD Biological Nutrient Removal (BNR) treatment plant (New Plant). The New Plant was in service. The Old Plant was out of service.

At the time of the inspection, Amalio Quiros was acting as Plant Operator for the Guanica WWTP. Mr. Quiros has obtained the certification as a WWTP Operator Level IV, license # 2099, which expires on April 21, 2020.

III. OPERATIONAL CONDITIONS

A. Preliminary Treatment

1. Bar Screens/Comminutors

i) The plant has two entrance channels: one channel has a bar screen, and the other channel has a comminutor. The bar screen was on stand-by mode. The comminutor was in service. The entrance channel with the bar screen is used when the comminutor goes out of service.

2. Influent Wet Well/Influent Pumps

i) The wet well was clean, and had no solids.

ii) The plant has six (6) influent pumps: three (3) for the old plant, and three (3) for the new plant. The three influent pumps for the new plant were in service.

The three units for the old plant were out of service.

3. Grit Removal Mechanism

i) The facility has two (2) Pista type grit removal systems. Both units were out of service.

ii) The screw conveyor used to collect the grit was on stand-by mode.

B. Secondary Treatment

1. Biological Nutrient Removal (BNR) – The BNR has two (2) clarifiers: unit # 1 was on stand-by mode, and unit # 2 was in operation.
2. Clarifier # 2.
 - i) Unleveled weirs were observed at the clarifier. Effluent does not flow in a uniform pattern through the “V-type” effluent weirs. See Figure # 3 attached.
 - ii) The clarifier’s arm had its rubber broken, as seen in Figure # 2 attached.
 - iii) Algae growth and short-circuiting at the “V-type” effluent weirs were observed at the clarifier # 2.
 - iv) Supernatant was observed at the surface of the clarifier # 2.
 - v) Sludge was observed at the inner baffle or center well of the clarifier # 2.
 - vi) The post aeration stage had excessive bubbling, as seen in Figure # 1 attached.
 - vii) The equalization tank has two blowers, one of them was out of service.

C. Chlorination/De-chlorination Facilities

- i) There are three (3) chlorine contact chambers at the facility. One unit was in operation and had supernatant at its surface, as seen in Figure # 5 attached. Two units were on stand-by mode.
- ii) The chlorine inventory at the time of the inspection consisted of four (4) - two thousand gallon pound chlorine cylinders (2,000 lbs): one (1) chlorine cylinder was in use, two (2) chlorine cylinders were full, and one (1) chlorine cylinder was empty.
- iii) The plant has two (2) chlorine leak detectors. When a chlorine leak was simulated, both units did work. The chlorine leak detectors were calibrated. Their calibration will expire in July/2017.
- iv) The exhaust fan was out of service.
- v) The automatic chlorine dosifier device was in operation. Its calibration will expire in October/2017.
- vi) The chlorine scales (reference instruments) were in operation.

D. Sludge Handling

- i) The aerobic digester chamber was operating as intended.
- ii) The plant has two (2) unroofed sludge drying beds. At the time of the CEI, one unit was empty, and one unit was full.
- iii) The sludge belt filter press was on stand-by mode. The sludge container was half-full. Sludge is disposed at the Ponce Landfill.

E. Alternate Power Unit (APU)

- i) The new 750 KVA Alternate Power Unit (APU) has a 5,000-gallon diesel tank capacity. At the time of the CEI, it had approximately 2,555 gallons.
- ii) AAA-500-C Form is being completed on a bi-weekly basis.
- iii) At the time of the CEI, the plant operator performed the power outage simulation.

F. Auto-Samplers

- i) This facility has two (2) auto-samplers. At the time of the CEI, the temperature inside influent auto-sampler was 3°C, and the temperature inside the effluent auto-sampler was 4°C. Both temperatures were within the acceptable range of less or equal to 6°C.
- ii) The influent and effluent sampling hoses looked clean.

iii) The calibrations for the auto-sampler thermometers will expire in October 7, 2017.

G. Daily Sampling Meters

- i) The dissolved oxygen, the colorimeter, the turbidimeter, the pH and the residual chlorine meters were in good operational conditions.
- ii) The calibration for the above-mentioned equipment will expire in October/2017. But will expire in July/2017 for the turbidimeter.

H. Flow Measuring Devices

- i) The primary flow measuring device being used at the facility is a Parshall flume.
- ii) A flow totalizer and a chart recorder were being used as secondary flow measuring devices.
- iii) The effluent flow totalizer calibration will expire in July/2017.
- iv) The chart recorder's calibration will expire in October/2017.

I. Additional Observation

Corrosion throughout the facility was observed. Figure # 4 attached shows a partial view of corrosion at pipelines.

IV. **SAMPLING**

The effluent sample was evaluated at the discharge point (Point 001) for the parameters shown below at the time of the inspection:

Effluent Grab Sample Results	
Color	No
Grease	No
Oil Sheen	No
Foam	No
Floatable Solids	No
Settleable Solids	No
Turbidity	7.22 NTU
Residual Chlorine	0.08 mg/L
Temperature	30.0°C
Dissolved Oxygen	7.41 mg/L
pH	7.41 S.U.

V. RECORDS REVIEW

A. A copy of the NPDES permit was available at the plant.

B. Process Control, Sampling and Compliance Data Record

1. Copies of the daily sampling average reports were available for review.
2. A review of the DMRs for the period of May 2016 to April 2017 revealed the following exceedances:
 - May/2016 – Fecal Coliforms.
 - June/2016 – pH.
 - July/2016 – November/2016 – No exceedances were reported.
 - December/2016 – Arsenic.
 - January/2017 – Enterococci.
 - February/2017 – April/2017 - No exceedances were reported.
3. Copies of the monthly sampling itineraries and sampling records were available for randomly review. Documents appeared to be updated.
4. Copies of the auto-samplers maintenance records and chain of custody data were available for review. Documents appeared to be updated.

C. Maintenance Records

1. Equipment operational status checklist (Form AAA-48) - The equipment operational status is being check on a daily basis.
2. At the time of the CEI, the operational status of the following equipment either out of service or in malfunction was listed in Form AAA-48 as follows:

EQUIPMENT	DATE	SAP NUMBER	NOTIFICATION NUMBER	COMMENT
Pump/Motor Degritter # 1	05/13/2017	208765	10330755	Got burned
Panel Degritter # 1	02/16/2015	213031	10314226	Out of service
Motor-Blower # 1	11/20/2015	1116116	10366591	Oil leak
Clarifier's Arm - Transmission	09/15/2015	209657	10352613	Broken rubber
BNR Clarifier # 1 Building	11/30/2015	-----	10366548	Short circuit
Clarifier's Arm Transmission – BNR # 1	10/21/2015	209653	10360441	Broken rubber
Sum Pump Wet Pit Original # 1 - Influent	05/17/2016	1104905	10394901	Got burned
BNR Clarifier # 2 Building	01/06/2016	-----	10371991	Short circuit
Clarifier's Arm – BNR # 2	03/06/2016	209654	10381900	Broken rubber
Mixer BNR Aerobic # 1	03/24/2016	1112952	10384844	Out of service
Mixer BNR Aerobic # 2 Stage 1	03/24/2016	1112953	10384845	Out of service
Motor-Blower EQ # 2	06/09/2016	208949	10399438	Oli leak, broken pulleys
BNR Building Recirculation Pumps	01/15/2016	-----	10375633	Need a dike

EQUIPMENT	DATE	SAP NUMBER	NOTIFICATION NUMBER	COMMENT
Chlorine contact chamber # 3	01/17/2016	-----	10460522	Open valve
Drainage valve anaerobic # 1 – BNR	03/06/2016	-----	10381905	Broken
Motor Blower # 3	06/09/2017	208951	10469926	Breaker got tripped
Humidity Analyzer	03/01/2017	1110027	10451004	Malfunction
Chlorine Room Exhaust Fan	05/15/2017	1112473	10464856	Malfunction
Pump/Motor NPW # 1	03/23/2017	11129780	10453997	Mechanic seal
NPW Pumps Panel	01/14/2017 06/13/2017 06/13/2017	1114177	10437514 10470442 10470443	Not visible No reading Malfunction
Pump/Motor Degritter # 2	05/28/2017	208766	10455402	Malfunction
Sum Pump Wet Well Influent # 2	05/26/2017	1104906	10467127	Solids accumulation
Sum Pump Wet Well Influent # 3	06/09/2017	1105306	10469930	Malfunction
Sludge Pump/Motor # 2	04/24/2017	208768	10461000	Water leak
Horizontal Conveyor – Filter Press	03/21/2017	209334	10453993	Malfunction
Vertical Conveyor – Filter Press	03/21/2017	209333	10453994	Malfunction
Filter Press	03/15/2017	1107285	10453012	Leak
Filter Press Control Panel	05/04/2017	1115971	10457845	Malfunction
Transmission Arm - Clarifier #2	05/12/2017 03/16/2017	209654	10466049 10381900	Got tripped Broken rubber
Blower BNR # 2	03/04/2017	208945	10450495	Pulley, Axle
Pump/Motor Recirculation BNR # 1	05/23/2017	208762	10466232	Leak
Pump/Motor Recirculation BNR # 2	04/09/2017	208763	10438461	Leak
Control Panel Sludge Recirculation Pumps	05/09/2017	213040	10465825	Malfunction
Canister Hoist - Degritters	03/28/2017	-----	10455427	Malfunction
Flow meter	05/28/2017	-----	10467265	Intermittent fail
A/C	05/30/2017	-----	10467583	Malfunction
Sludge Waste Valve	05/31/2017	-----	10467839	Adjustment


D. Documentation available demonstrates that the last Chlorine Safety Management Refresher Training was taken by the operator on February 24, 2016. The OSHA Refresher Course (8 hrs.) was taken on February 10, 2016.

VI. CONCLUSION

Please note that Part C.5 of Attachment I of the permit requires the permittee to properly operate and maintain all facilities and systems for collection and treatment (and related appurtenances) which are installed or used to achieve compliance.




INSPECTOR SIGNATURE



DATE

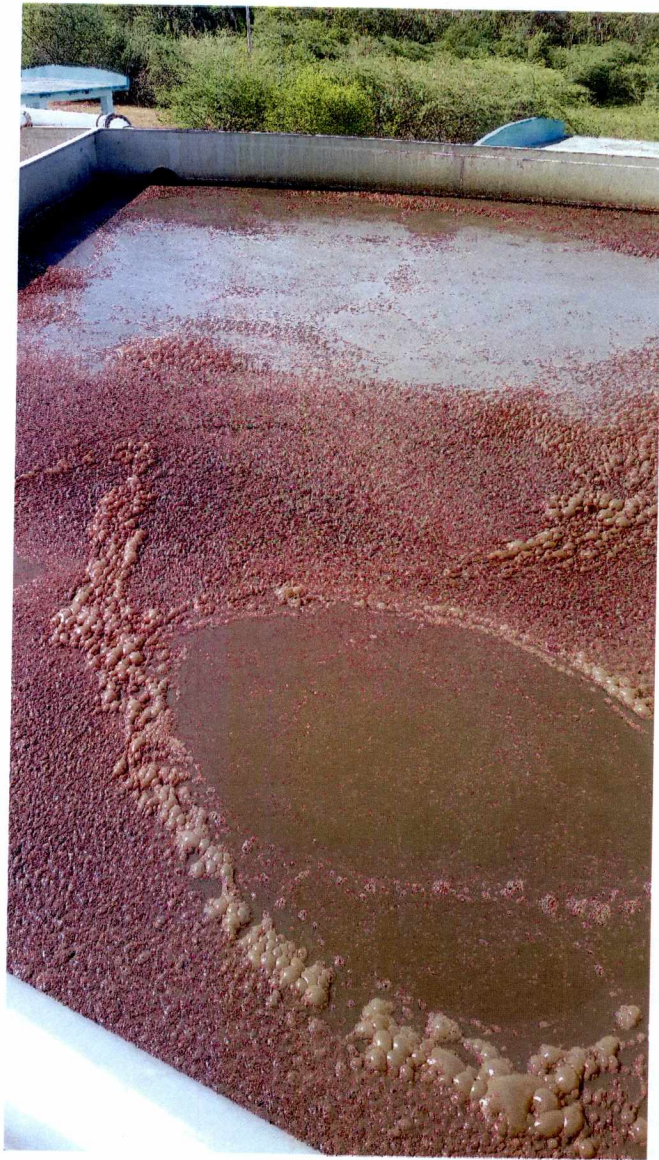


SUPERVISOR SIGNATURE



DATE

Attachment



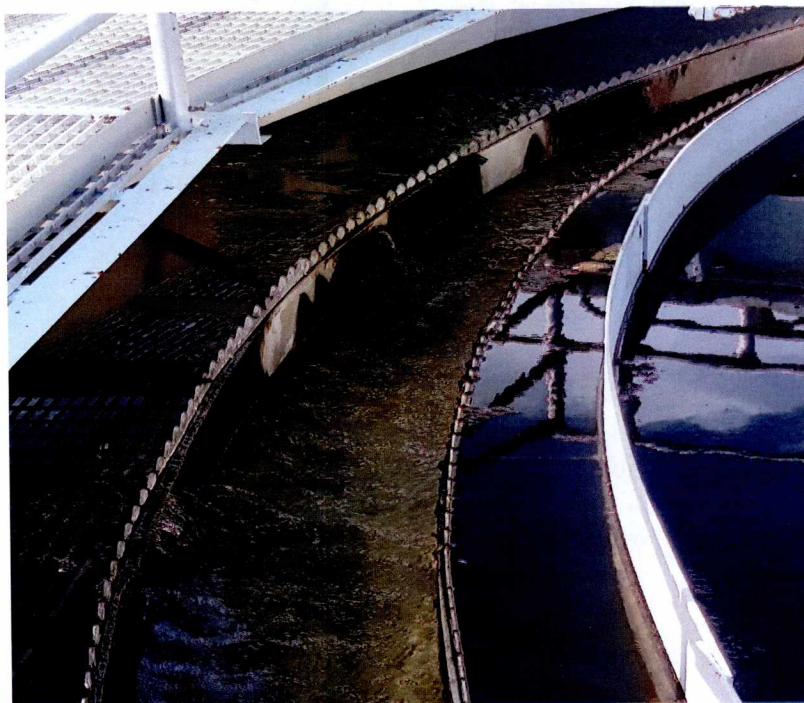
Guánica Waste Water Treatment Plant (CEI)

June 19, 2017

Figure # 1 – Post aeration stage.



Guánica Waste Water Treatment Plant (CEI)
June 19, 2017
Figure # 2 – Clarifier's arm rubber.



Guánica Waste Water Treatment Plant (CEI)
June 19, 2017
Figure # 3 – “V-type” effluent weirs.



Guánica Waste Water Treatment Plant (CEI)
June 19, 2017
Figure # 4 – Partial view of corrosion at the plant.



Guánica Waste Water Treatment Plant (CEI)
June 19, 2017
Figure # 5 – Supernatant at the chlorine contact chamber.